6JE6A

Beam Power Tube

NOVAR TYPE

SPECIAL PLATE STRUCTURE[a]

For Color TV Horizontal-Deflection-Amplifier Applications

ELECTRICAL

Heater Characteristics and Ratings

Voltage (AC or DC)	6.3 ± 0.6	V
Current at 6.3 V	2.500	A
Maximum heater-cathode voltage		
Heater negative with respect to cathode:		
Peak	200	V
Heater positive with respect to cathode:		
Peak	200	V
DC component	100	V

Direct Interelectrode Capacitances (Approx.)

Without external shield		
Grid No.1 to plate	0.56	pF
Input: G1 to (K, G3, G2, H)	22	pF
Output: P to (K, G3, G2, H)	11	pF

MECHANICAL

Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	4.130 in
Seated Length	3.500 to 3.750 in
Diameter	1.438 to 1.562 in
Dimensional Outline (JEDEC No. 12-116)	See *General Section*
Bulb	T12
Cap	Small (JEDEC No. C1-1)
Base	Large-Button Novar 9-Pin with Exhaust Tip (JEDEC No. E9-88)
Basing Designation for BOTTOM VIEW	9QL

Pin 1 - Grid No.2
Pin 2 - Grid No.1
Pin 3 - Cathode
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Grid No.1
Pin 7 - Grid No.2
Pin 8 - Grid No.3
Pin 9 - Do Not Use
Cap - Plate

CHARACTERISTICS

Plate Voltage	-	55	175	-	60	175	V
Peak Positive-Pulse Plate Voltage[b]	5000	-	-	5000	-	-	V
Grid-No.3 Voltage	+30	+30	+30	+30	+30	+30	V
Grid-No.2 Voltage	125	125	125	145	145	145	V
Grid-No.1 Voltage	-	0	-25	-	0	-35	V
Plate Resistance (Approx.)	-	-	5800	-	-	7000	Ω
Transconductance	-	-	9600	-	-	7500	µmhos

Plate Current.	-	580[c]	130	-	710[c]	95	mA
Grid-No.2 Current. . .	-	40[c]	2.8	-	55[c]	2.4	mA
Grid-No.1 Voltage (Approx.) for plate mA = 1.	-120	-	-54	-125	-	-60	V
Triode Amplification Factor (Triode connection: grid No.2 connected to plate at socket).	-	-	3[d]	-	-	2.8[e]	

HORIZONTAL-DEFLECTION AMPLIFIER

Maximum Ratings, Design-Maximum Values

For operation in a 525-line, 30-frame system

DC Plate Supply Voltage.	990	V
Peak Positive-Pulse Plate Voltage[f]	7500	V
Peak Negative-Pulse Plate Voltage.	1100	V
DC Grid-No.3 Voltage[g].	75	V
DC Grid-No.2 (Screen-Grid) Voltage	220	V
Peak Negative-Pulse Grid-No.1 (Control-Grid) Voltage	330	V
Cathode Current		
Peak	1200	mA
Average.	350	mA
Grid-No.2 Input.	5	W
Plate Dissipation[h]	30	W
Bulb Temperature	250	°C
At hottest point on bulb surface		

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance		
For grid-resistor bias operation[h]	0.47	MΩ
For plate-pulsed operation. . . . . (Horizontal-deflection circuits only)	10	MΩ

[a] Designed to minimize secondary-electron emission from plate and eliminate "knee" discontinuites in zero-bias region.

[b] Under conditions shown in footnote[e].

[c] This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

[d] Plate volts = grid-No.2 volts = 125; grid No.3 connected to cathode at socket; grid-No.1 volts = -25.

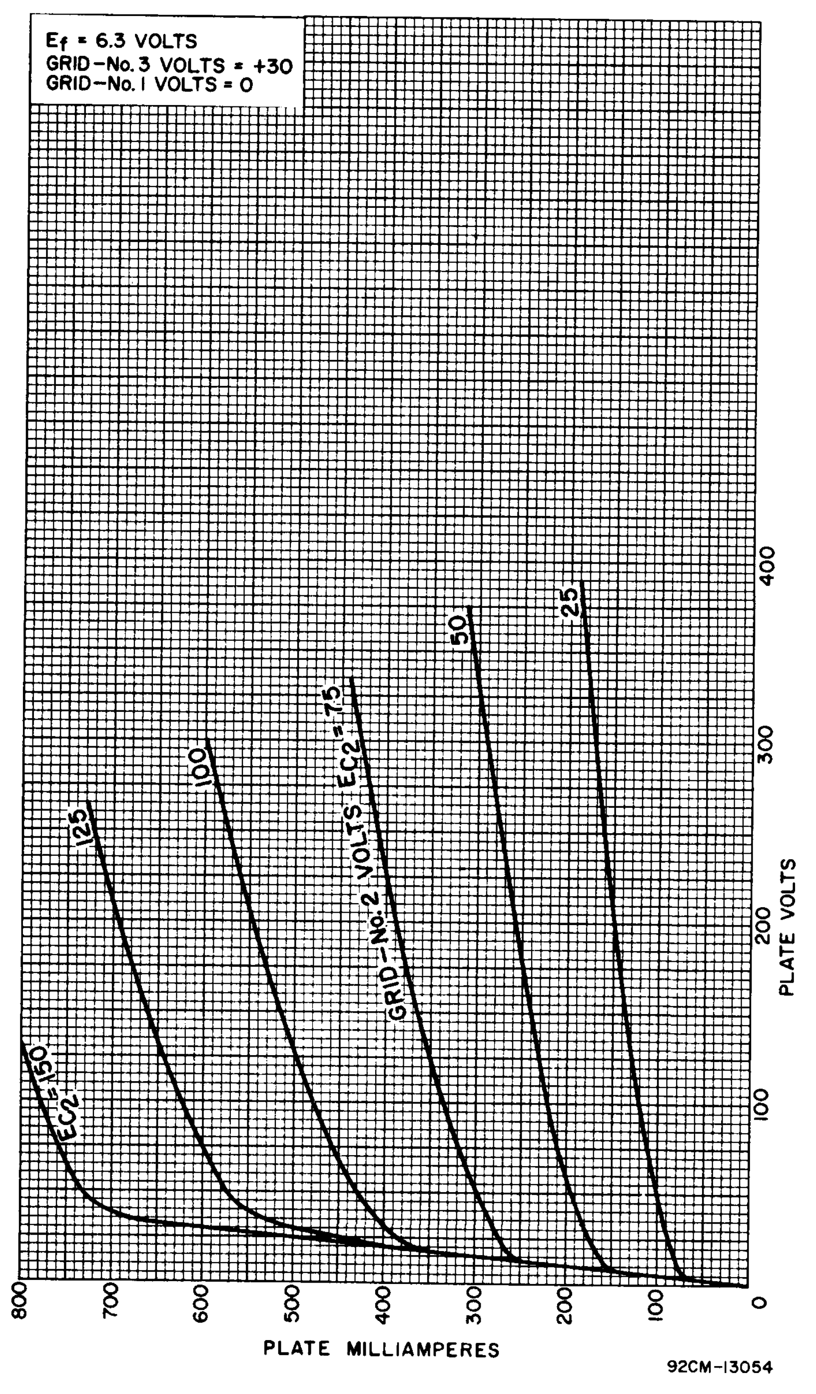
[e] Plate volts = grid-No.2 volts = 145; grid No.3 connected to cathode at socket; grid-No.1 volts = -35.

[f] This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.

[g] In horizontal-deflection-amplifier service, a positive voltage should be applied to grid No.3 to reduce interference from "snivets", which may occur in both vhf and uhf television receivers, and to increase power output. A typical value for this voltage is 30 volts.

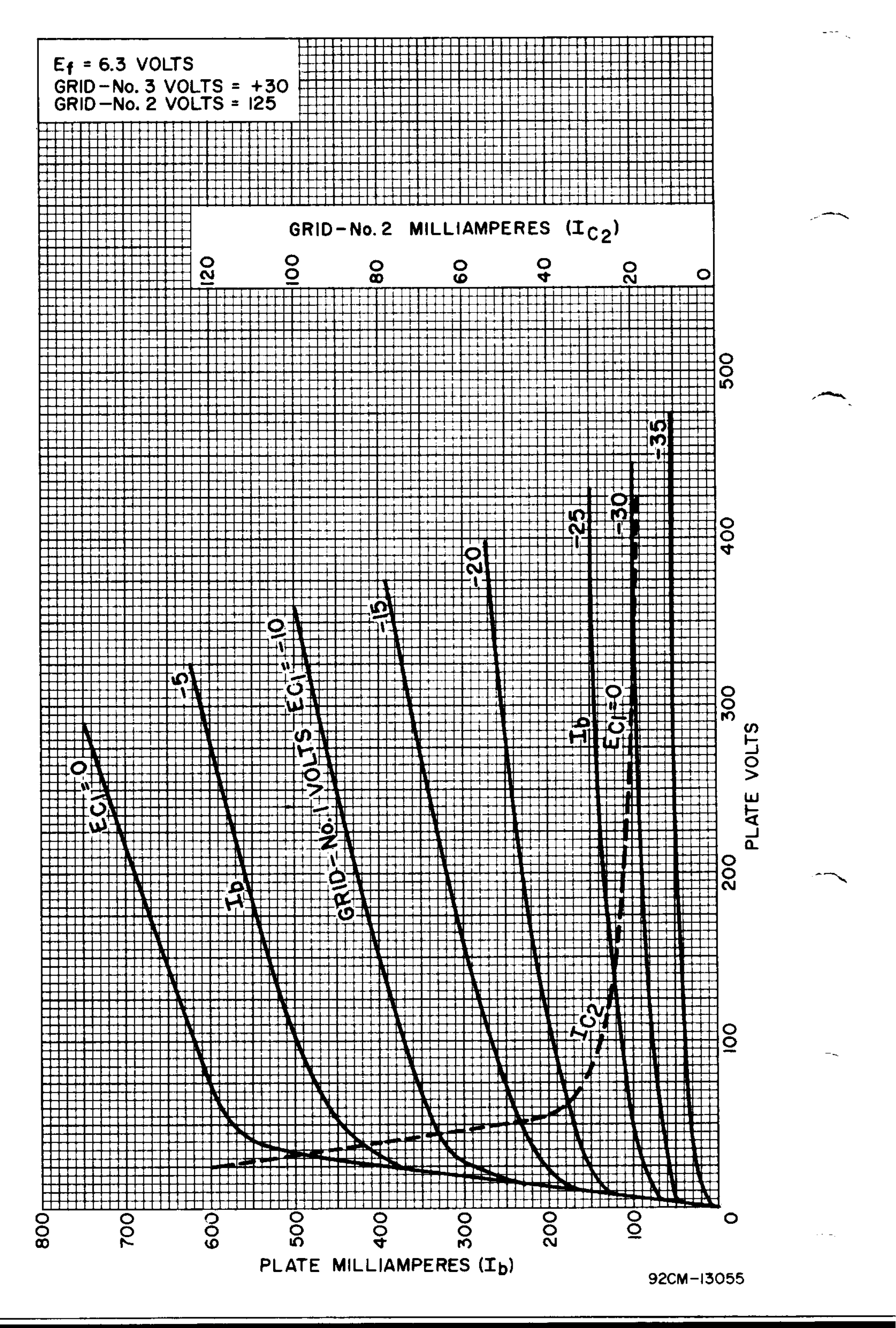
[h] An adequate bias resistor or other means is required to protect the tube in the absence of excitation.

Average Characteristics



92CM-13054

Average Characteristics



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